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Robert A. Hoppe and Janet E. Perry

Levels and Sources of Income Among Farm Operator Households

SOURCES of income vary substantially among the 2.1 million U.S. farm operator households. Most farm households report some off-farm income, both earned and unearned. Off-farm income typically comes from wages, salaries, and self-employment. Some households, however, report income mainly from unearned sources (interest, dividends, and retirement income). How do the levels and sources of household income differ by household and farm characteristics? What are the implications of these differences?

Levels and Sources of Income Vary

Farm operator households' income from all sources averaged \$37,400 in 1991, similar to the average income for all U.S. households (\$37,900). However, the level of income varied substantially among operator households. About a quarter had income less than \$10,000, including a tenth reporting negative income (fig. 1). At the other extreme, a fifth had income more than \$50,000.

On average, off-farm income sources dominate farm operator household income (fig. 2). Only 16 percent of average household income came from farm income in 1991; the rest came from off-farm sources. But, these averages hide variation in dependence on off-farm income. About 9 percent of operator households received no off-farm income (table 1). Another 14 percent received more income from their farm than from off-farm sources.

In contrast, the households in a third group—households with off-farm income greater than farm income—lost money (on average) from operating their farms. This group's off-farm income raised its total household income to about 94 percent of the U.S. average. Of the three

groups, only households with no off-farm income had total household income significantly below the U.S. average.

Dependence on off-farm income also differs by household and farm characteristics. The characteristics we consider here are farm size, commodity specialization, location, operator's age, operator's major occupation, and hours of farm work by the operator.

Farm Size. Because small farms (sales less than \$50,000) commonly have negative returns, their operator households received more than 100 percent of total household income from off-farm sources. Despite farm losses, small-farm households had an average total income close to that of the average U.S. household because of their off-farm income.

Commercial farms (sales of \$50,000 or more) depended less on off-farm income, with the share of income coming from off-farm sources decreasing as farm sales increased. Nevertheless, commercial farms still received substantial off-farm income, on average.

Specialization. Farms were categorized according to the commodity that contributed the largest share of gross sales. Households operating dairy farms depended least on off-farm sources. On average, they received 45 percent of their income from off-farm sources. Dairy farming is labor intensive, leaving less time for off-farm work. Over 80 percent of dairy operators spent at least 2,000 hours working on their farms. Dairy farms also often use household labor other than the operator's, making it difficult for other household members to work off-farm. Dairy operator households had the largest farm income, and their total average household income was 83 percent of U.S. average household income.

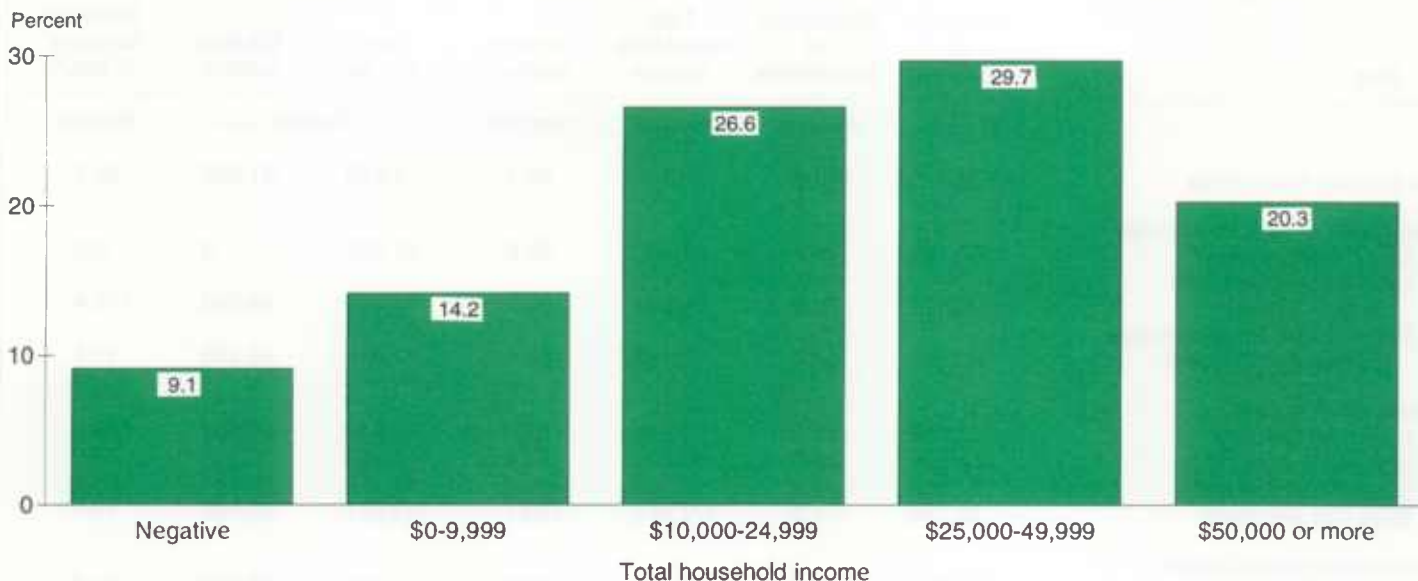
Households most dependent on off-farm income specialized in beef, hog, or sheep enterprises or other livestock enterprises. At least 80 percent of the farms in both these

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Figure 1

Distribution of farm operator households by total income, 1991

Nearly a quarter of operator households lost money or had income below \$10,000

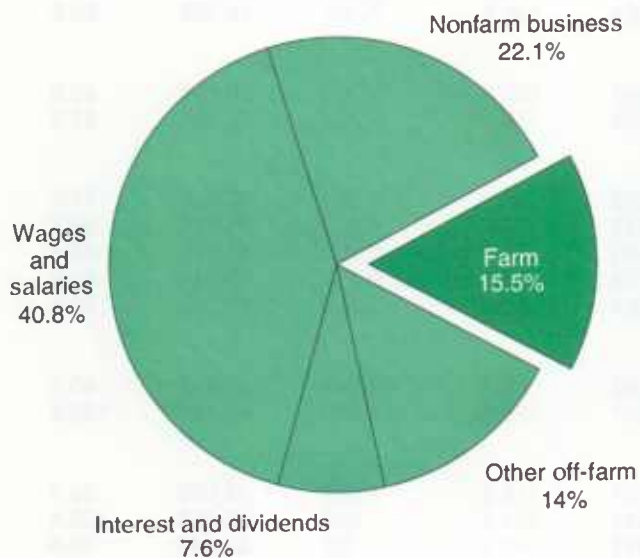


Source: Calculated by ERS using data from the 1991 Farm Costs and Returns Survey.

Figure 2

Sources of farm operator households' income, 1991

Most farm operator household income comes from off-farm sources



Source: Calculated by ERS using data from the 1991 Farm Costs and Returns Survey.

groups had sales of less than \$50,000 in 1991. Consistent with their small-farm profile, about 60 percent of the households in both groups lost money farming.

Location. Operator households everywhere have become more integrated with the off-farm economy. However,

dependence on off-farm income varies geographically. Dependence on off-farm income was less for farm operator households in the Midwest than in other regions. In the Midwest, average off-farm income accounted for about 75 percent of average operator household income, at least 12 percentage points lower than in the other regions. And, Midwestern operators were more likely to report farming as their major occupation. Total income per operator household was highest in the West (\$55,700), largely because of relatively high off-farm income.

One might expect reliance on off-farm income to be less in the 556 farming-dependent counties, where at least 20 percent of earned income comes from farming. Farms are larger in these heavily Midwestern counties, and off-farm employment opportunities may be more limited. Yet, in farming-dependent counties, farm operator households still received—on average—about 70 percent of their income from off-farm sources.

Operator's Age. Farm business owners usually do not have a set retirement age. Operators may phase out of farming gradually, reducing work time and farm size as they grow older. Elderly operators (age 65 and older) worked fewer hours per year on their farms (1,200) than operators in other age groups. Their farms are mostly small, with 86 percent having sales of less than \$50,000. Although they may be phasing out of farming, elderly operators still control sizable farm assets. The average net worth of their farms was \$371,300.

Table 1

Levels and sources of farm operator households' income, 1991*Importance of off-farm income varies with household and farm characteristics*

Item	Number of households	Distribution of households	Total household income	Income relative ¹	Farm income	Off-farm income	Off-farm as share of total ²
	Number	Percent	Dollars	Percent	Dollars		Percent
All operator households	2,080,132	100.0	37,447	98.7	5,810	31,638	84.5
Dependence on farm income:							
No off-farm income	180,363	8.7	21,452	56.6	21,452	0	0.0
Farm income less than off-farm income	1,599,211	76.9	35,540	93.7	-3,710	39,250	110.4
Farm income equal to/greater than off-farm income	300,557	14.4	57,194	150.8	47,074	10,120	17.7
Sales class of farm:							
Less than \$50,000	1,517,758	73.0	33,822	89.2	-1,840	35,662	105.4
\$50,000 to \$249,999	457,625	22.0	33,147	87.4	13,952	19,195	57.9
\$250,000 to \$499,999	67,953	3.3	71,330	188.1	47,333	23,997	33.6
\$500,000 and more	36,796	1.8	177,910	469.1	143,421	34,489	19.4
Commodity specialization:							
Cash grain	399,543	19.2	34,390	90.7	9,718	24,672	71.7
Other crop	479,272	23.0	45,903	121.0	8,673	37,231	81.1
Beef, hogs, and sheep	889,830	42.8	35,149	92.7	1,576	33,573	95.5
Dairy	157,973	7.6	31,631	83.4	17,566	14,065	44.5
Other livestock	153,514	7.4	38,313	101.0	-855	39,170	102.2
Region:							
Northeast	127,982	6.2	39,712	104.7	4,511	35,201	88.6
Midwest	845,924	40.7	33,266	87.7	8,309	24,957	75.0
South	836,278	40.2	35,444	93.5	2,982	32,462	91.6
West	269,947	13.0	55,684	146.8	7,356	48,328	86.8
County type:							
Farming-dependent counties	296,679	14.3	38,933	102.7	12,238	26,695	68.6
Other counties	1,783,453	85.7	37,200	98.1	4,741	32,460	87.3
Operator's age:							
Younger than 35	193,376	9.3	31,288	82.5	8,653	22,635	72.3
35-44 years	428,661	20.6	36,378	95.9	4,823	31,555	86.7
45-54 years	470,327	22.6	50,403	132.9	7,333	43,070	85.5
55-64 years	456,336	21.9	35,729	94.2	6,812	28,916	80.9
65 years or older	531,432	25.5	30,561	80.6	3,363	27,198	89.0
Operator's major occupation:							
Farming	1,175,108	56.5	31,163	82.2	12,248	18,915	60.7
Other than farming	905,023	43.5	45,607	120.3	-2,550	48,157	105.6
Hours operator worked on farm:							
Less than 500 hours	444,473	21.4	43,684	115.2	1,645	42,039	96.2
500 to 999 hours	405,500	19.5	38,449	101.4	-928	39,376	102.4
1,000 to 1,999 hours	545,148	26.2	34,471	90.9	127	34,343	99.6
2,000 hours or more	685,011	32.9	35,177	92.8	17,023	18,154	51.6
Type of operation:							
Full-time commercial farms ³	426,741	20.5	44,340	116.9	28,397	15,943	36.0
Other farms	1,653,390	79.5	35,668	94.1	-20	35,688	100.1

¹Total household income divided by U.S. average household income (\$37,922).²Income from off-farm sources can be more than 100 percent of total household income if farm income is negative.³Full-time commercial farms have sales of \$50,000 or more and an operator whose main occupation is farming and who worked 2,000 or more hours on the farm.

Source: Calculated by ERS using data from the 1991 Farm Costs and Returns Survey.

Data and Definitions

Data for this article came from the 1991 Farm Costs and Returns Survey (FCRS). The FCRS is a cooperative project of the Economic Research Service and the National Agricultural Statistics Service. The annual survey collects national financial data on farm businesses and basic characteristics of the farm operator and household.

Household data are available only for senior farm operators who run farms organized as sole proprietorships, partnerships, or family corporations. Statistics for 1991 in this article are based on 11,800 sample households. The size of the sample, however, fluctuates from year to year depending on the resources allocated to conduct the survey.

To measure household income properly, income from all sources must be included. Most U.S. households receive income from multiple sources. Almost half of all U.S. households had two or more workers in 1991, and many households also received unearned income. Farm operator households are similar, receiving income from both farm and nonfarm sources. To measure farm operator household income properly, income from both these sources must be combined.

Household farm income includes the operator household's share of their farm's cash income less cash expenses and depreciation. Calculating the household's farm business income this way is consistent with Census Bureau procedures, allowing comparisons between farm operator households and all U.S. households. Also included as farm income are cash received by the household from renting out farmland, wages paid by the farm business to household members, and net income received by the household from another farm business.

These procedures do not value the considerable nonmonetary income farm households receive, such as the imputed rental value of the dwelling. Farmers, because they are self-employed, also receive certain tax advantages that most people do not. Although depreciation is a legitimate expense, it is not a cash expense, does not reduce cash-flow, and is available for spending.

This article makes some comparisons between farm operator households and all U.S. households. Data for all U.S. households are from the Census Bureau's Current Population Survey (CPS). CPS income, following Census Bureau procedures outlined above, does not include nonmonetary income, such as Medicare, employer-subsidized health insurance, and the imputed rental value of owner-occupied housing. Therefore, the CPS, like the FCRS, understates income.

Phasing out of farming resulted in low average farm income for elderly farm operators, reducing their total household income. Households with an elderly operator had an average income that was 81 percent of the U.S. average. However, elderly operators' average income was 25 percent higher than that for all U.S. households with elderly householders.

Almost 90 percent of elderly operators' average household income came from off-farm sources, with nearly half of their off-farm income coming from "other off-farm income," which includes Social Security. Another 19 percent of their off-farm income came from interest and dividends, reflecting savings and investments by these households during earlier years. Unlike elderly operators, operators under age 65 received most of their off-farm income from wages, salaries, or self-employment.

For all U.S. households, average income peaked at \$50,700 when the householder was in the 45-54 age group. Average income for operator households also peaked in this age group at \$50,400. This operator household income was 133 percent of average U.S. household income for all age groups and 99 percent of income of those in the same age bracket. Members of operator households in this age category brought in the largest off-farm income (\$43,100), mostly from earned sources.

Like elderly farmers, young operators (under age 35) had relatively low average household income, 83 percent of the U.S. average. Another picture emerges, however, when young operator households are compared with similar U.S. households. Average household income for young operators was about the same as for U.S. households with a householder of the same age.

Young operators actually had the highest farm income (\$8,700) of all the age categories, probably because they worked more hours per year on their farms (2,000 hours, on average) than operators in other age groups. Average household income was lower for young operator households than for all operator households because of their lower off-farm income.

Operator's Major Occupation. We divided households into two groups depending on the major occupation of the operator. Households with an operator whose major occupation was farming had total income that was 82 percent of the U.S. average, compared with 120 percent for other households. This relatively low percentage resulted more from low off-farm income than from low farm income. These households earned an average of \$12,200 in farm income, compared with a loss of \$2,600 for other households. As one would expect, their off-farm income accounted for a relatively low 61 percent of total income.

Note that the measure of farm household income does not capture nonmonetary income received by farm households. In addition, farmers and other self-employed workers also receive tax advantages. Thus, the income of households with operators reporting farming as their major occupation understates the amount of spendable resources. (See "Data and Definitions" for more information about the measurement of operator household income.)

Hours of Farm Work. Working on farm fewer hours increases opportunities to earn off-farm income. Total household income was highest for households whose operator worked fewer than 500 hours per year on the farm, due to more off-farm income.

Nearly a third of operators worked 2,000 hours or more per year on their farms. In an off-farm job, 2,000 hours per year is equivalent to full-time work (40 hours per week for 50 weeks per year). Households with full-time operators had \$17,000 in farm income, much more than households in any of the other hours-worked-onfarm categories. Households with a full-time operator received only about half of their total household income from off-farm sources. Households with a full-time operator had a total income of \$35,200, which fell within 7 percent of the average for all U.S. households.

Households with a Full-Time Commercial Farm. Although we stress dependence on off-farm income in this article, table 1 also shows which characteristics lead to greater dependence on farm income. If we examine households with several of these characteristics, we find a group that has large farm income relative to off-farm income.

Consider households running commercial-sized farms where the operator's main occupation is farming and the operator works 2,000 hours or more per year on the farm. Households running these full-time commercial farms received \$28,400 from their farms, 64 percent of their total household income. Combining their farm and off-farm income, their household income was higher than both the U.S. average and the average for other operator households.

These full-time commercial farms are very important to U.S. agriculture. Although they made up only about a fifth of all family farms, they produced nearly three-fourths of the value of farm production in 1991. The net worth of these farms was \$599,800, more than twice that of other farms. About a third specialized in cash grains and a fourth specialized in dairy.

Implications

Households running full-time commercial farms depend heavily on farm income. Farm income may also be especially important to elderly households with few employment opportunities or to people living in areas with few alternatives to farming. On the other hand, off-farm income allows many farm operator households to main-

tain an adequate total income and remain in farming. Generally speaking, the groups of operator households that achieve an average total income at or above the U.S. average do so through large off-farm income or through operation of full-time commercial farms.

The local economy affects operator households regardless of farm characteristics, region, or whether the farm is located in a farming-dependent county. Understanding this connection between the local economy and farm operator households is crucial in discussions of ways to improve or maintain the economic well-being of farm people.

Concern over operator households' economic well-being has traditionally been expressed through farm programs. Because farming still is an important source of income for many operator households, these programs cannot be ignored. However, farm programs can have only limited effect when most farm operator household income comes from off-farm sources. And, not all farms produce commodities covered by the programs. Farm programs have the most effect on households that depend heavily on farm income and specialize in program commodities. Similarly, farm programs are more likely to affect local economies in farming-dependent counties specializing in program commodities.

Strengthening local economies where farm operators live could help members of farm operator households find better off-farm jobs. Efforts to strengthen local economies could include a variety of economic development measures. Examples of such measures recently discussed in *Rural Development Perspectives* include using telecommunications to overcome geographic isolation and establishing locally administered revolving loan funds to help businesses. (See Rowley and Porterfield, Leistritz, and Stinson and Lubov in "For Further Reading.") As another example, some rural development specialists have suggested attracting the elderly and their retirement income. (See Hoppe in "For Further Reading" for cautions regarding this strategy.)

Off-farm employment may not be a reasonable option for farm operators who spend long hours working on full-time commercial farms. Nevertheless, rural development could help other household members find jobs (or better jobs), if they can be spared from farm work.

For Further Reading

M. C. Ahearn, J. E. Perry, and H. S. El-Osta, *The Economic Well-Being of Farm Operator Households, 1988-90*, AER-666. USDA-ERS, January 1993.

R. A. Hoppe, "The Elderly's Income and Rural Development: Some Cautions," *Rural Development Perspectives*, Vol. 7, No. 2, February-May 1991, pp. 27-32.

R. A. Hoppe, *Farming Operations and Households in Farming Areas: A Closer Look*, AER-685, USDA-ERS, May 1994.

F. L. Leistritz, "Telecommunications Spur North Dakota's Rural Economy," *Rural Development Perspectives*, Vol. 8, No. 2, pp. 7-11.

J. Perry and B. Hoppe, "Farm Household Income Estimates Provide Additional Perspective on Farm Families," *Agricultural Income and Finance*, AFO-49, USDA-ERS, May 1993.

T. D. Rowley and S. L. Porterfield, "Can Telecommunications Help Rural Areas Overcome Obstacles to Development?" *Rural Development Perspectives*, Vol. 8, No. 2, pp. 2-6.

T. F. Stinson and A. Lubov, "Minnesota's Nonmetro Cities Use Revolving Loans as a Development Tool," *Rural Development Perspectives*, Vol. 8, No. 2, pp. 12-17.

Food, Agriculture and Rural Policy into the Twenty-First Century: Issues and Trade-Offs

Milton C. Hallberg, Robert G. F. Spitze, and Darrell E. Ray, editors. Boulder, CO: Westview Press, 1994, 406 pages. ISBN 0-8133-8763-9 (cloth) \$69.95. To order, call 1-800-456-1995.

Using farm policy to stimulate rural economic development might be likened to motivating a mule with a two-by-four: it's not very effective and may well have deleterious, unintended consequences. As an edited text of 20 chapters on agriculture and related policy and one on rural development, *Issues and Trade-Offs* is not likely to change such an opinion. It provides the policy setting for the debate that will culminate in the 1995 Farm Bill.

From the perspective of the Congressional policy formulation process, *Issues and Trade-Offs* presents the formidable expanse, and a taste of the depth and interrelationships, of the various elements that become a farm bill. The book is best used by those observing or hoping to influence the formulation of farm policy. It provides the context in which a specific interest may be sacrificed to other objectives and must compete for Congressional attention at all.

Practitioners and researchers of rural development may be disappointed with only a single chapter. "Rural Development and Human Resource Adjustment" by Deaton and others demonstrates the impotence of farm policy to affect even farming-dependent areas where the majority of the income is from non-farm sources. Except for remoteness, economically depressed rural areas have little in common. The authors point out that many policy issues that address the diverse problems of rural areas (such as community infrastructure, health care and leadership, a declining tax base, telecommunication facilities, and non-farm employment opportunities) lie outside the immediate realm of Congressional committees on agriculture. Other chapters that address issues of rural credit, land use, off-farm income, or the multiple objectives of farm policy, acknowledge the unintended impact on rural communities. From the Congressional perspective, the book illustrates how rural development may be set aside to deal with other problems more readily within the grasp of committee jurisdiction.

Perhaps the book is most useful in the chapters central to fundamental farm policy debate: land use, agricultural trade, supply control, commodity policy, and risk management. These chapters will preoccupy the committees' attention. Readers with other policy interests should pay attention to how policy decisions on one issue complicate the policy objectives on other issues central to the committees' concerns. Such complication

may relegate the reader's issue to a lower standing in the policy formation process.

Dicks and Osborn, in "Land Use Issues," recount the history of cyclical policy attempts to expand and control agricultural production, from the Land Ordinances of 1785 and 1787 to the Conservation Reserve Program of the Food Security Act of 1985. They illustrate the conflicts of multiple-objective policies that attempt to reach environmental, supply management, and rural development objectives.

The interdependency of U.S. domestic and international farm commodity markets forces a reconciliation of domestic farm policy with trade and international market realities. The larger debate on farm issues must resolve the strong influence trade has on farm prices and incomes, government program cost, equity and distribution concerns, and farm asset values. The authors also question the effectiveness of large expenditures on U.S. agricultural and trade policies, which, they note, don't seem to have made farmers better off or more competitive. The effects of trade liberalization in the recently approved Uruguay Round of the GATT will further limit commodity and trade policies both in degree, as prescribed by the agreement, and in effectiveness. The improved market opportunities afforded by the agreement will also shape the policy debate.

The chapter on supply control details the complex maze of programs to induce farmers to forgo production on their land. In the name of controlling surplus, in both short and long term, these programs raise prices that stimulate production on other acres. These programs, in turn, are related to effects on livestock producers, natural resources, and rural communities. The authors examine the implications for international trade, particularly the difficulties of making supply control policies workable under free trade agreements with Canada and Mexico. A reading of the commodity policy chapter reveals best the detail, diversity, and arcane nature of policies, described broadly elsewhere, that can absorb Congressional policymakers' attention, at the expense of other policy issues.

Risk management policies are receiving new interest in Congress, as budget constraints force consideration of alternatives to transfer payments. These policies are addressed in the chapter on crop failure protection. More than just crop loss, risk management issues include macroeconomic effects of exchange, interest rate, and price volatility. Policy alternatives from disaster payments to crop insurance to revenue insurance are examined for performance criteria of budget exposure, equity, and efficiency considerations such as incentives to increase risky practices, asset values, and market efficiency.

Early chapters describe the setting in which the debate will be conducted, the economic climate, and policy history which may be useful to some readers. More interesting are chapters on ancillary issues to agricultural production and marketing such as water quality, sustainable agriculture, food safety, and nutrition. Here there is tension between “traditional” farm interests and issues that are resolved at a greater expense to agriculture. While other chapters are careful not to pose solutions, these chapters raise questions for which solutions are not readily available, such as standards of consumer “credence characteristics” of food that surround the discussion of food safety and nutrition. In the case of sustainable agriculture, the inherent vagueness of the issue itself raises questions as to whether cultivation practices labeled “sustainable” may have a less beneficial environmental effects in the long run, relative to “nonsustainable” practices. One citation suggests that “four times more land would be required to produce the same quantity of food produced today if technology were held to 1910 levels.” Readers of these chapters will gain an appreciation for the grinding pace that policy deliberation can take.

Readers may very well be frustrated with the desire for a conclusion that *Issues and Trade-Offs*, by its very nature, does not provide. Its well-documented review of literature may narrow some policy questions, but it often omits the results of quantitative analysis that might provide the reader with the sharp edge to slice through some of the rhetoric surrounding issues that are raised.

Reviewed by Chip Conley, an economist with the U.S. House of Representatives Committee on Agriculture.

Mapping It Out: Expository Cartography for the Humanities and Social Sciences

Mark Monmonier. Chicago: The University of Chicago Press, 1993. 301 pages. ISBN 0-226-53416-2 (cloth) \$37.00. ISBN 0-226-53417-0 (paper) \$15.95. To order, call 1-800-621-2736.

What is a map? What makes a map effective communication? Mark Monmonier, professor of geography at Syracuse University, answers these questions in *Mapping It Out*, an excellent guide to creating and using maps. Monmonier states that his goal is to show how to integrate maps and words, and he meets this goal clearly and eloquently.

Social scientists of all varieties, scholars in the humanities, and, in particular, historians will find *Mapping It Out* useful. In addition to step-by-step directions, Monmonier provides lots of creative solutions to map problems. The book can be used as a reference and does not need to be read in its entirety. For example, while historians and political scientists will be interested in different world globe projections, most economists and sociologists can easily skip that chapter and focus on the chapters on statistical maps, immigration and change maps, and relational maps. Monmonier’s presentation of relational maps—maps based on relative space and not geographical distance—intrigued me. I was not familiar with relational maps, but now I have an additional presentation tool, well suited for economic analysis, at my disposal.

Monmonier proves his breadth of experience. He is equally comfortable using a map from the 1500’s as he is creating his own map with mapping software. He presents both the more literal—maps from satellite photographs—as well as the more conceptual—a U.S. map indicating both the relationship between women as a percentage of elected officials in local gov-

ernment and the female participation in the labor force. He is not wedded to any one method for creating maps, and he provides a variety of sources and methods for obtaining or creating maps. He gives tips both for photocopying a map and for using computer software.

Two chapters are useful beyond a cartography context. One, on design concepts and publishing considerations, is relevant to anyone creating charts, graphs, or diagrams. The other is a discussion of copyright law. Other features of the book are a discussion of cartographic sources, an annotated bibliography, thorough footnotes (which are readable on their own), and an index.

Despite my enthusiastic response to *Mapping It Out*, I have two criticisms and one observation. First, there are too few map examples. There are fewer than one map for every two pages, which means that many fascinating map solutions are described but not shown. Second, Monmonier only touches on the issues of subjectivity of maps and of map ethics. A chapter on these topics would have made *Mapping It Out* truly comprehensive. Perhaps Monmonier did not want to repeat himself; his previous book, *How to Lie with Maps* (University of Chicago Press, 1991), is devoted to how maps can be intentionally or unintentionally misleading. Finally, I am struck with the old-fashioned look and design of *Mapping It Out*. The appearance of the book seems incongruous with the contemporary context.

Reviewed by Karen Hamrick, an economist at ERS-RED.

Regional Economic Modeling: A Systematic Approach to Economic Forecasting and Policy Analysis

George I. Treyz. Boston: Kluwer Academic Publishers Group, 1993. 544 pages. ISBN 0-7923-9382-1 (hardback) \$89.00. To order, call 1-617-871-6600. Software diskettes are available at no charge from Regional Economic Models, Inc., 306 Lincoln Avenue, Amherst, MA 01002 (1-413-549-1169).

Scholarly text, savvy marketing tool, or both? I raise this question because George Treyz is the President of Regional Economic Models, Incorporated (REMI), and REMI designs, maintains and sells the models used in the book. According to the book’s jacket, the REMI model is the principal regional economic policy analysis model used in the United States. The reader should be aware that the book is closely associated with REMI’s products.

Using a commercial modeling system for expository purposes is not necessarily a problem. In this case, the approach facilitates complex discussions by providing consistency. The REMI models are useful frameworks for discussing regional modeling in that they embody general regional modeling practices, theories, and specifications. However, there are different ways to model particular economic relationships. The art, therefore the difference, in models often comes from the modeler’s means of accounting for scarce or missing data. When data for a theoretically important variable are missing, modelers use related data as a proxy for the missing data estimate the missing data, or ignore the variable. The point is that the models used in this book specify regional economic linkages and activity in one way, but not the only way. In this light, the book may be closer to annotated operational documentation of the REMI model than to a text on regional modeling. The book, however, offers the reader more than a thorough description of a commercial product. I recommend that anyone interested in critically evaluating policy analy-

sis with economic models read the chapters on model application, interpretation, and the effects of assumptions.

This book is for model builders and for those who want to become sophisticated users of large regional economic models. The reader will gain an appreciation of what is necessary to properly use and interpret the results of policy simulations. Treyz provides detailed discussions of model structures, interpretations of model output, and the effects of various economic and demographic links and assumptions. Model builders will learn how a leading modeling company specifies its model. Additionally, Treyz's attention to issues such as proper specification of policy questions, interpretation of model results, and analysis of the effects of assumptions displays his careful and thoughtful approach to regional analysis. After reading this book, those who are not modelers but are interested in using economic models to analyze policy decisions can become critical consumers and judges of policy analysis.

The book uses a very structured approach in presenting its topic. A diagrammatic format displays model linkages, notation is simple and consistent, and mnemonic variable names are consistent. These efforts help minimize the confusion that can result from presenting hundreds of equations. For example, chapter 2 alone uses over 220 equations. The number of equations should not be intimidating because Treyz consistently uses them to illustrate economic relationships.

Treyz organizes the book in three parts, each part building on the previous. Part I of the text introduces regional economic modeling with a simple economic base model. This simple model illustrates basic ways to model key economic relationships or linkages in an economy. Treyz also discusses issues encountered in producing forecasts and policy simulations. Building on the discussion of the simple model, Treyz develops the prototype model. This significantly more complex model provides a richer representation of a regional economy. The prototype model provides the basis for the fully operational model developed in part II.

Part II expands the prototype model to account for differences in industrial, regional, and demographic characteristics. This expanded model is the REMI Economic and Demographic Forecasting and Simulation model (REMI-EDFS.) Treyz carefully examines the structure, use, and operational characteristics of this model. He concludes this part by evaluating the importance and effects of specific assumptions and linkages in the model. The relatively short part III presents a sample of applications and studies that have been conducted with the REMI models.

Throughout the book, Treyz focuses on three aspects of regional modeling: 1) key relationships for understanding open regional economies, 2) proper use of models, and 3) informed interpretations of analytical results. The book does not, however, survey the development of regional economic models, modeling techniques, or modeling approaches. For example, Treyz mentions computable general equilibrium models only in passing and does not describe their capabilities or relation to the REMI model. Discussions of statistical techniques used in modeling, such as econometrics, are also left for other books.

In addressing the first aspect of regional modeling, Treyz uses step-by-step derivations of model equations to illustrate key economic relationships. These relatively simple modeling specifications may belie complex theoretical underpinnings of many regional economic relationships. For example, Treyz carefully derives the specification of the optimal capital stock equations in the prototype model. However, he devotes very little discussion

to explaining the theoretical characteristics of the concept or its importance to a regional economy. For discussions of theory, the reader should seek the other sources cited in the text.

The discussion of the second and third aspect is much more satisfactory. Treyz analyzes hypothetical policy changes to show the steps required in using economic models for analysis. In the first step, he creates a baseline forecast to provide a reference. Then, he focuses on defining the policy change and its representation in the model. He also compares the model solution with the baseline forecast to show the effects of the policy change.

In his discussion of the third aspect, Treyz further analyzes the policy change by interpreting the output of the model simulation in great detail. Treyz traces the effects of the policy change through the various linkages of the model, emphasizing how each linkage contributes to the result. To identify these contributions, Treyz solves a fully specified model and then solves the model with a major linkage of the model suppressed. Comparing the two solutions reveals the effects of the linkage. Treyz augments the analysis by discussing the contribution of the linkage to a theoretically satisfying explanation of the regional economy.

An interesting dimension of the book is that it comes with two diskettes containing PC software. The first diskette contains software for the models discussed in part I of the book. This software enables users to manipulate the fully specified prototype model plus several simple models introduced in part I. The second diskette contains a scaled-down version of the more sophisticated REMI model software discussed in part II of the book. These two sets of software amplify one of the strongest points of the book—the emphasis on the nuts-and-bolts operation of economic models. Users can reinforce the lessons of the book by producing their own forecasts and policy analyses. These hands-on exercises take economic modeling out of the “black box.”

The text provides detailed installation and operation information for both sets of software. The prototype model software contains 58 files requiring 1.3 megabytes of storage. The REMI model software is relatively large. The installation procedure creates 75 files requiring 2.7 megabytes of storage. After running simulations, the number of files increased to 90 and the required storage to 3.5 megabytes. I encountered no major problems in installing or operating either software set on an IBM compatible 386 with 8 megabytes of RAM and an 80-megabyte hard drive. The documentation in the book anticipates many problems that may arise with particular computer configurations. If you get in a bind, REMI provides a telephone number for consulting support.

The software for the prototype model and relatively simple models of part I should be particularly popular with users. It is configured for easy use with logically arranged pull-down menus. The text fully covers the characteristics of each model using the same notation, mnemonics, and equation numbers found on the software. Treyz presents the data in an informative format. For example, while a model is being solved, the initial value for a variable, its equation in the model, and the resulting solution value are displayed.

The prototype model can be calibrated to a unique U.S. county or State. To get the most from the software, I recommend the reader create a model for a region other than the default. Following the step-by-step instructions for calibrating the prototype model is easy and helps avoid problems. The full calibration exercise yields a greater familiarity with the entire modeling

process including collecting data, creating control forecasts, simulating policy effects, and displaying the results. Excellent help windows support each step of the process.

The software for the REMI model of part II is the same that the company sends to potential customers. Although this software appears less sophisticated than the prototype model software, it supports a much more complex model. Manipulation of the model is somewhat awkward in that it is easy to get stuck in a long list of questions without the aid of immediate supporting help screens. However, the detailed output available with the REMI model is impressive. The data tables allow you to trace the effects of a policy change on the region's employment, personal income, gross regional product, and other economic variables.

The software is an excellent addition to a text that emphasizes the practice of regional modeling. To avoid frustration, read the appropriate chapters and appendixes first. Also, several sessions at the computer will be required to obtain the most knowledge from the exercises. It will take some time before the average user becomes comfortable with the volume of numbers the REMI model can generate. It will take even longer before you can provide a meaningful interpretation of your policy change in terms of the model's output. However, if you are serious about learning how to use economic models, an investment of time with this book and software will pay off well.

Reviewed by Tom Lienesch, an economist with the King County, Washington, government.

Agricultural Research Alternatives

William Lockeretz and Molly D. Anderson. Lincoln, NE: University of Nebraska Press, 1993. 239 pages. ISBN 0-8032-2901-1 (cloth) \$30.00. To order, call 1-402-472-3581.

Adherents to reform in the practice of agriculture have suggested that the research community has not often been open enough to entertain new approaches, a situation not unique to agriculture. Often, these adherents felt that the research community has kept itself locked up too long behind the ivied walls of learning or within their laboratories of study to provide useful answers to real world problems. Lockeretz and Anderson enter this fray with a reasoned description of the strengths and shortcomings of the Nation's agricultural research and how it affects alternative agriculture. They also offer a well-thought-out prescription for agriculture research.

Some have felt society must change from traditional, chemical-based agriculture to a sustainable agriculture, or as Lockeretz and Anderson call it, alternative agriculture, system. Sustainable agriculture, though, has meant different things to different people. While the authors do not explicitly define their use, nor do they need to, the general outline of what is alternative agriculture is clear.

The concepts used in alternative agriculture originated with organic farming even though the early practitioners of alternative agriculture did not share in the philosophy that often went with organic farming. Nevertheless, they held similar broad prescriptions for farming systems. They would reduce or eliminate use of synthetic pesticides and fertilizers from the farm's operation. Farm-generated resources should replace, when fea-

sible, purchased inputs including chemicals. Farms should diversify their production.

Two forces have led to the advancement of alternative agriculture. Farmers themselves were the first force. Farmers found pragmatic reasons to adopt some organic methods with the primary reason coming from the realization of the harmful health effects of agrichemicals. The second force originated off the farm, where support for alternative agriculture grew from food safety groups and environmentalists.

Agricultural research, however, must be improved in order to allow alternative agriculture to optimally develop. The authors offer promising suggestions along the lines of five basic concepts for reforming agriculture research. First, research should cross traditional academic discipline boundaries. Only then can a farm be analyzed as a system and as a consequence can alternative farming approaches be fully understood. Second, research should be grounded in ecological principles that includes crop, livestock, the environment, and people. Integrating ecosystem and social system knowledge would permit the evaluation of long-term affects of different mixes of inputs and outputs, the relationship between economics and ecology, and the role of people in agricultural activities.

Third, a farmer's knowledge makes a critical contribution to the success of any farming system. Too often, generic formulas are developed and applied to solve most production problems without examining the alternatives. Fourth, agricultural research should more often be conducted on working farms. More realistic experimental conditions would avoid the oversimplification that is acceptable for studying specific components of farming activities, but not for examining an entire farming system. Fifth, farmers should play a greater role over the direction of agricultural research. A greater role would cause research to more fully fill the needs of farmers. The final three overlapping concepts all would bring the farmer closer to the ongoing research activity.

The Nation's agricultural research institutions are over a century old and have undergone a slow transformation in their missions. The land-grant universities and the State experiment stations were established in the 19th century. They held, as far as agriculture was concerned, a focus of research oriented toward production. The Adams Act (1906) formally shifted the focus at the experiment stations work from service to research. The Smith-Lever Act (1914) established the Cooperative Extension System, thus freeing the stations' scientists of extension work.

Several pieces of landmark legislation expanded the view of agriculture research. The Purnell Act (1925) established economic and sociological research at the state experiment stations. The Bankhead-Jones Act (1935) expanded the realm of the socio-economic research and brought the issues of conservation of land and water resources into the purview of the stations. The Research and Marketing Act (1946) required the U.S. Department of Agriculture to conduct research on agricultural marketing and distribution. Each of these acts responded to a perceived need for redirecting the agricultural research institutions.

The legislative actions on the research institutions combined with the establishment of grant programs and the precepts of the scientific disciplines formed the agriculture research world of today. The legislative actions and grant programs are the external forces that have developed them. The scientific disciplines are the forces that have molded them from within. From them may lie the answers needed to create a better agricultural research environment.

The book emits an invigorating breath of fresh air in an otherwise stale world of modern reform literature. Unlike most other books and articles on the subject of reforming institutions, in this case the agriculture research institutions, the authors go well beyond the veneer of the issue. Lockeretz and Anderson know well that many of their suggestions have been argued before. When they have, the authors usually discuss why they haven't been successfully adopted. They acknowledge that viewpoints other than their own may also be valid, and they often analyze the tradeoffs between them.

One may not always agree with their conclusions, but it is not from any lack in the authors' knowledge or skill at supporting their arguments. Beyond their deep and broad understanding of the subject, they have had feedback on their research from some of the most knowledgeable people in agriculture today. Their arguments are well thought out and presented. The authors largely succeed at presenting a thoughtful panorama of the complex world of agricultural research methodology.

Reviewed by Peter L. Stenberg, an economist at ERS-RED.

Dakota: A Spiritual Geography

Kathleen Norris, New York: Ticknor & Fields, 1993. 224 pages. ISBN 0-395-63320-6 \$19.95.

When I began work in the rural development research field, I naively believed that rural researchers had some connection to or deep interest in rural areas. That we all had grown up in small towns or rural areas, wanted to be living there, or were planning to retire there. Then I met a colleague from Brooklyn who went to college and graduate school in Manhattan (New York City). The closest he ever came to rural living was his home in northern Virginia, near Washington, DC. He was astounded that I had grown up in a small Wisconsin town and had lived, by choice, in some very small towns (one with 32 people) in Idaho and Montana. This colleague kept asking me, "What do people do in rural areas? What do they do?" I thought of my colleague while reading *Dakota: A Spiritual Geography*. Norris answers those questions in eloquent, haunting, and unsentimental language.

Norris chronicles her life since the early 1970's, when she and her husband, both poets, moved from New York City to Lemmon, South Dakota. She had inherited her grandparents' house, the house where her mother grew up, and where Norris had spent her childhood summers. Norris postulates on why many people are uncomfortable with the Great Plains, while presenting the purpose of the book:

Dakota is a painful reminder of human limits, just as cities and shopping malls are attempts to deny them. This book is an invitation to a land of little rain and few trees, dry summer winds and harsh winters, a land rich in grass and sky and surprises. On a crowded planet, this is a place inhabited by few. . . I am one of them. . .

More than any other place I lived as a child or young adult—Virginia, Illinois, Hawaii, Vermont, New York—this is my spiritual geography, the place where I've wrestled my story out of the circumstances of landscape and inheritance. The word 'geography' derives from the Greek words for earth and writing, and writing about Dakota has been my means of understanding

that inheritance and reclaiming what is holy in it. . . (pp. 2-3).

But why should rural development researchers and practitioners read *Dakota*? How will this book help us? *Dakota: A Spiritual Geography* provides a human understanding and background for our research. The book shows us the rich, sometimes frustrating complexity of rural life. It shows us that most rural problems are interrelated, and it suggests that studying problems separately places an artificial distinction on them. It suggests that not all the answers to rural problems can be solved by analyzing data and recommending solutions from our removed and often urban settings. Reading *Dakota: A Spiritual Geography* can be a humbling experience.

Norris confronts several myths or falsehoods in the paradigm of small town and rural life. The two major myths are stability and community in rural life.

Many, even rural residents, often believe that small town and rural life has not changed, that it is stable. This is closely related to the notion of "the good old days," that there actually was a problem-free time. The small towns on the Plains were never really stable or free of troubles. "...some 80 percent of homesteaders left within the first twenty years of settlement, and our boom-and-bust agricultural and oil industry economy has kept people moving in and out (mostly out) ever since" (p. 8). The population of Perkins County, which includes Lemmon, was "11,348 at the height of the homestead boom in 1910; 7,055 in 1925; 5,530 in 1945; 4,700 in 1980; and 3,932 in 1990" (p. 47).

Norris further argues that the myth of stability leads to a romanticism of the past, creating an inertia and an inability to recognize and respond to changing economic realities.

The second major myth that Norris discusses is that of community:

Small towns pride themselves on their sense of community, the neighborliness which lack of anonymity is supposed to provide. When everyone knows everyone else, the theory goes, community is highly valued. This is evident when disaster strikes. A farmer hospitalized in early summer finds that his neighbors have put up his hay. A new widow's kitchen fills with friends and acquaintances who bring food, coffee, memories, and healing. . . . But the fault line of suspicion and divisiveness exposed by the farm crisis in the mid-1980s has left wounds that have not healed, making me wonder how real community is in my town and perhaps in other isolated Dakota towns that have seen three or four generations pass (pp. 49-50)

Norris eloquently describes many contradictory conditions particular to living in remote, sparsely populated areas. One contradiction is a sense of hospitality along with a distrust of outsiders. Another is the growing physical isolation that leads to insularity and a resistance to change along with a need to know and respond to global economic conditions to prosper. Another is a deep love of the land along with a willingness to promote the building of nuclear waste facilities.

This book comments upon and contributes to nearly every topic fashionable in the rural research field, such as employment, tourism, high technology, and education.

Norris offers an honest and modest portrayal of her life on the Great Plains—its contradictions and frustrations, its joys, beauty, and rewards. She offers no solutions to any of the rural condi-

tions that we in the rural development field study. Despite this (and because of this), *Dakota: A Spiritual Geography* is important for us in the rural development field to read. It is certainly more expansive and offers a different perspective from what we usually read. It humanizes what we study and helps to explain 'what people do in rural areas.'

Reviewed by Martha A. Frederick, a former geographer at ERS-RED.

Aging in Rural America

C. Neil Bull, editor. Newbury Park, CA: Sage Publications, 1993. 279 pages. ISBN 0-8039-4885-9 (cloth) \$46.00. ISBN 0-8039-4886-7 (paper) \$23.95. To order, call 1-805-499-9774.

How does the social and physical context in which rural elders live affect them in their daily lives? *Aging in Rural America* addresses this question by compiling the latest research on rural elderly persons. This edited volume of works by leading scholars covers a wide range of topics dealing with current questions in aging research. The book provides a good update of R.T. Coward and G.R. Lee's *The Elderly in Rural Society* (1985) and J.A. Krout's *The Aged in Rural America* (1986). This volume represents a welcome addition to the growing literature on the rural elderly and social gerontology.

This collection of essays is divided into four major aspects of rural aging. Part 1 contains basic demographic and background statistics. Using 1990 decennial census data and recent survey data, the chapter by Clifford and Lilley provides a good overview of the nonmetro population age 65 and older. It also presents trends in the number and proportion of the elderly by age, gender, and race. Research on the oldest of the old—the most rapidly growing segment of the older population—is of increasing importance. The chapter by Lucy Rose Fischer profiles this segment in rural Minnesota, using the Minnesota Senior Study to compare those age 85 and older with those 60 to 84 years old in terms of their needs, resources, and activities. The chapter specifically focuses on a group of the elderly who are poor and not well educated and have great trouble accessing needed resources.

Part 2 deals with the rural elderly's social needs, their economic contributions to communities, use of the community infrastructure, development of senior centers, and the need for transportation alternatives. In many rural communities, the elderly are a substantial proportion of the population, and many contribute through service and work to their communities. The chapter by Belden uses recent survey data to discuss the need for housing for the growing number of rural elderly. Kihl's chapter covers the elderly's transportation needs, looking at transportation patterns and travel preferences in a nine-county area on the Iowa-Missouri border and discussing the need for transportation alternatives for the rural elderly. The senior center is addressed in the chapter by McClain and others who studied four senior centers trying to become community focal points. That chapter also examines how senior centers aid in community development.

Part 3 covers the mental health of the elderly and their physical health, one of the better researched areas on the rural elderly. A major strength of this volume is that it addresses research areas that have previously been identified as obvious gaps in the knowledge about the elderly, such as their mental health and physical abuse. Rathbone-McCuan's chapter is concerned with mental health and depression. The chapter reviews the major

issues contributing to a lack of adequate mental health services for the rural elderly and makes several suggestions concerning the steps needed to overcome some critical shortages. Perrin's chapter on elder abuse offers a good beginning for research in this area, as she draws attention to the lack of a clear definition of abuse and the paucity of good data and estimates of elder abuse. The chapter presents definitions of elder abuse, details the incidence of abuse, profiles abusers and victims, discusses intervention strategies, looks at rural-urban differences, and examines problems of service availability. A noteworthy finding is that while there are no significant rural-urban differences in the incidence of abuse, there are significant differences in service options and intervention strategies.

Part 4 focuses on social supports of the elderly, including formal long-term care, home and community care, informal supports, and family relations. Havens and Kyle take a "system approach" in examining organizations that can assume the responsibility to keep the elderly functioning at the most independent level possible by choosing the right mix of services for them. The chapter by Nelson and Salmon looks at the continuum of long-term care and explores community capacity factors that influence the availability of both home and community care systems. The authors provide a good review, present recommendations involving home and community care networks, and emphasize the need for rural development strategies to improve service to older adults in service-deficient rural counties.

Kivett addresses another research gap concerning rural elderly minorities (Blacks, Hispanics, Native Americans, and Asian-Americans) with an emphasis on their informal support systems. Kivett also addresses the debate about the appropriate mix of informal and formal systems in determining rural elders' quality of life and well-being.

This well-organized collection of essays leaves little to criticize as it addresses the major research issues and focuses on a clearly defined area of research. Several chapters address gaps in research on the rural elderly, such as their mental health and abuse and details on rural elderly minorities. The informative chapters, varying widely in subject matter and type, are concise and well planned. Many of the authors explain changes in the overall economy and shifts in the level of funding available for social services (reductions in health care and long-term care), and, at the same time, seek to evaluate their effect on the rural elderly.

Overall, this volume admirably covers a broad range of salient research topics, with several chapters discussing services for the elderly. More indepth information on practice and service delivery to the elderly is in an upcoming book by J. Krout.

This collection concludes with the editor acknowledging topics not covered in the book that need further research, such as policy formation and implementation; thorough observations of minority elders and their sources of income; updated research on church and religion, crime, drug use, and abuse; and the contributions of older volunteers.

I agree with the editor's assessment of this volume as a stepping stone for future research. Limiting the scope of the present volume enhances rather than diminishes its usefulness. This volume represents a substantial contribution to rural aging research, and many readers will benefit from it, including researchers, academics, practitioners, service providers, and rural development specialists.

Reviewed by Carolyn C. Rogers, a demographer at ERS-RED.

R D ANNOUNCEMENTS P

Compiled by Karen Hamrick

Rural Economic Development, 1975-1993: An Annotated Bibliography

F. Larry Leistritz and Rita R. Hamm. Westport, CT: Greenwood Press, 1994. 320 pages. ISBN 0-313-29159-4 (cloth) \$65.00. To order, call 800-225-5800.

This bibliography identifies major publications on the process of economic development and economic revitalization strategies that pertain to nonmetropolitan areas. It covers works published in professional journals, books, university research reports, extension reports, conference proceedings, government reports, and unpublished papers accessible to the general public. Thus, it provides a starting place for students of rural development who are interested in the forces affecting various economic sectors (agriculture, manufacturing, recreation/tourism) and types of firms (high tech, telecommunications), their potential for contributing to rural economic development, and economic development policies and strategies that could be employed by various levels of government. It includes North American and European literature published in English and emphasizes the period from 1988 to 1993. The book also has author, geographic, and subject indexes which help users quickly identify specific literature from 748 citations. The senior author has published two other annotated bibliographies on the interdependence of agriculture and rural communities and on rural community decline and revitalization that cover literature published during the period from 1975 to 1987. Thus users may be best served by referring to all three bibliographies.

Derelict Landscapes: A Wasting of America's Built Environment

John A. Jakle and David Wilson. Savage, MD: Rowman & Littlefield Publishers, Inc., 1992. 342 pp. ISBN 0-8476-7736-2 (paper) \$23.50.

Jakle and Wilson, both geographers, focus in this book on the phenomenon of widespread neglect of buildings. They assert that society's "throwaway" mentality adopted over the last 40 years has resulted in a rate and amount of derelict zones unprecedented in the United States. In *Derelict Landscapes* they outline the economic, societal, and cultural forces that have led to this dereliction of the landscape, and discuss strategies that have been successful in reversing building and neighborhood decay.

Specific topics covered include deindustrialization and the effect on industrial areas, central city decline, abandoned neighborhoods, historic preservation and area revitalization, and the importance of community in preventing dereliction. Of particu-

lar interest is the chapter devoted to rural areas. Discussed are the causes of rural landscape decline—outmigration, poverty, the concentration of farm production, and mineral extraction—and the results—abandoned farmland, soil erosion, dying small towns, and deteriorating roads and railroads. The authors connect the decline in rural areas and decline in central cities. *Derelict Landscapes* includes photographs, an extensive bibliography, and an index.

Applied Agricultural Research: Foundations and Methodology

Chris O. Andrew and Peter E. Hildebrand. Boulder, CO: Westview Press, 1994. 223 pp. ISBN 0-8133-8781-7 (paper) \$35.00. To order, call 800-456-1995.

This volume is a revised version of *Planning and Conducting Applied Agricultural Research*, first published by the authors in 1977. The goal of the book is to "... improve the process of problem identification, of selecting alternatives and priorities to help explain and resolve the problem, and the specification of research objectives to effectively and efficiently guide the needed tasks of observation and analysis." (p.1) Andrew and Hildebrand outline the research process: specifying the research problem, formulating the hypothesis, limiting the project to available resources, determining the research objectives, conducting the research, and finally, communicating the research results.

Although the intended audience is graduate students in agricultural sciences, *Applied Agricultural Research* is general enough to be useful to the novice social science or science researcher. The discussion is nontechnical and covers the fundamentals of implementing a research project. Particularly helpful are the five applied research proposal examples that are provided. Specific topics covered in the book are experimental and non-experimental data, case studies, and survey data. The book includes references and an index.

Proceedings of the Regional Growth and Community Development Conference

James R. Follain and John P. Ross, editors. Published in *Cityscape: A Journal of Policy Development and Research*, Vol. 1, No. 1, August 1994. U.S. Department of Housing and Urban Development. To order, call 800-245-2691 (301-251-5154 in the Washington, DC, area).

This volume includes papers presented at the Regional Growth and Community Development Conference held in 1993 and sponsored by the U.S. Department of Housing and Urban Development (HUD). Although the purpose of the journal

Cityscape is to examine urban policy issues, the topics covered are relevant to rural areas. The journal editor (Michael A. Stegman) states that "Economic relationships and interactions occurring within regions, it is clear, have not received sufficient attention. Not enough is known about how a community can stimulate its own growth." (p. iii) Toward greater understanding of these relationships, papers included in this issue cover the topics of poverty (Andrews), industrial development (Henderson), and the importance of industry mix (Garcia-Milà and McGuire). The policy controversy focusing on people or on place is examined, and a literature review of the place-based policies is presented (Ladd). The development triage decision—"...is the return to public investment higher in the slightly wounded places or in those near death?" (p. 6)—is presented (Ihlanfeldt, Lynn). Other policy issues discussed are the role of various levels of government within the Federal system and the role of the Federal Government in economic development programs (Bartik).

Projections of Education Statistics to 2005

U.S. Department of Education, National Center for Education Statistics, January 1995. #065-000-00699-5 \$14.00. For more information, call Debra Gerald, 202-219-1581.

This National Center for Education Statistics forecast looks at national projections over the next ten years for elementary, secondary, and postsecondary teachers; and elementary, secondary, and postsecondary expenditures. It also provides State projections for public elementary and secondary enrollment and public high school graduates. Projections contact: Debra Gerald, 202-219-1581.

The Demography of Rural Life: Current Knowledge and Future Direction for Research

David L. Brown, Donald R. Field, and James J. Zuiches, editors. University Park, PA: Northeast Regional Center for Rural Development, 1993. Publication #64. \$8.95. To order, call 814-863-4656.

In 1991 the Department of Rural Sociology at the University of Wisconsin-Madison held a Symposium to honor the work of Glenn V. Fuguitt. Fuguitt has been at Wisconsin-Madison for 40 years, and has made a significant contribution in the research, teaching, and outreach activities of rural demography. This volume contains the papers presented at the Symposium. The papers, most by former students of Fuguitt, discuss leading issues in rural demography. Topics include rural-urban population trends (Brown and Zuiches), rural migration and population redistribution and resulting economic inequality (Lichter), the prospects for survival of small towns (Johansen), and agrarian rural America (Beale). Also included is a discussion of applied demography and how rural sociology contributed to its development (Voss). The volume closes with comments by Fuguitt on how the field has changed over the last 40 years, and on what the current challenges and opportunities are in rural demography.

Effective Communication: A Local Government Guide

Kenneth M. Wheeler, editor. Washington, DC: International City/County Management Association (ICMA), 1994. 260 pp. ISBN 0-87326-094-5 (paper) \$36.00 plus \$3.50 handling charge. To order, call 800-745-8780.

The Guide's purpose is "... to provide local government administrations and employees with clear and succinct guidelines to

communicating successfully as they perform the work of local government." (from Forward, no page number) This is an extensively revised version of *Effective Communication: Getting the Message Across* that ICMA published in 1983. Half the book is devoted to communicating with four important audiences: voters, elected officials, government employees, and the media. The chapter on the media is especially useful, as all aspects of media relations are covered. Included are suggestions on how to build a working relationship with the media, how to handle news conferences, and legal issues in media relations.

The Guide stresses the importance of having a comprehensive communications plan. The second half of the book covers a variety of techniques and tools that can be utilized in a communications plan. Many managements basics are touched on here, including interpersonal communication and making presentations. Also discussed are how to create effective local government publications and how to use cable television as part of a communications strategy. Many examples from various communities are used throughout the Guide, and an extensive annotated reference list is provided.

What Future for Our Countryside? A Rural Development Policy

Paris, France: Organisation for Economic Co-operation and Development, 1993. 80 pages. ISBN 92-64-13808-0 (paper) \$20.00 plus \$4.00 handling charge. To order, call OECD's U.S publications office: 202-785-6323.

This report is an overview of rural conditions in the OECD Member countries. For several years the OECD has recognized the need to study rural development policy, both in its own right and in conjunction with agricultural policy reform. The report states that "[t]he challenge for rural development policy is to improve the balance of economic opportunities and social conditions between rural and urban areas—without destroying the rural heritage or suppressing the market incentives that lead to structural change." (p. 8) Included in the publication are a statement of findings and conclusions from the OECD Group of the Council on Rural Development and a detailed report describing the situation and policy goals in the Member countries.

Community Economic Analysis: A How To Manual

Ronald J. Hustedde, Ron Shaffer, and Glen Pulver. North Central Regional Center for Rural Development, 317 East Hall, Iowa State University, Ames, Iowa 50011-1070. 1993. 65 pages. RRD 141. ISBN 0-936913-06-1 (paper) \$4.00.

This manual "... is designed to assist individuals who need to bring information to a group of citizens or decision makers concerned with the economic future of a community." (p. v) The reader is guided through various tools and techniques for understanding and measuring the economic activity of a community. These economic indicators can provide information on the current economic conditions and help determine the community's options for economic development. Included are tools to help address the following: how is the community linked to nonlocal markets?; what is the community's trade area?; and how can the community attract and keep retail and service sales? The concepts of multipliers, Reilly's Law, and shift-share analysis are presented in a nontechnical manner. The manual has a detailed example and an extensive bibliography.

The Condition of Education in Rural Schools

Joyce D. Stern, editor. U.S. Department of Education, 1994. 140 pages. ISBN 0-16-045034-9 (paper) \$10.00. To order, call 202-512-1800 (ask for stock number 065-000-00-653-7).

This report is a comprehensive overview of the condition of education in Rural America. Data from an expanded set of surveys done by National Center for Education Statistics over 1987-88 were used to get a better picture of rural education than had been possible before. Topics discussed in the report include the location and characteristics of rural schools and school districts, the connection between rural schools and their communities, policies and programs for rural education, teachers and principals in rural schools, education reform, school financing issues, student performance, and employment experiences of rural youth. Extensive supporting tables and technical notes are provided.

Farms, Mines, and Main Streets: Uneven Development in a Dakota County

Caroline S. Tauxe. Philadelphia, PA: Temple University Press, 1993. 276 pp. ISBN 1-56639-070-2 (cloth) \$39.95.

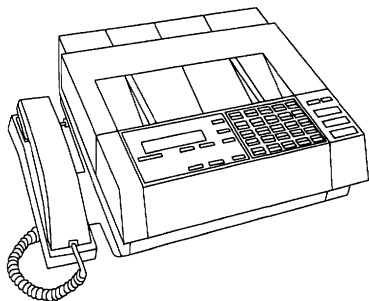
Based on anthropological field work, this book examines the changes wrought in a predominantly agricultural county of western North Dakota by the energy boom of the late 1970s and early 1980s - specifically strip coal mining and coal gasification. This book, however, is different from traditional studies of western mining boom towns in that it attempts to relate the Mercer County experience to so-called World Systems Theory. This approach arose as a response to Modernization Theory, which saw economic development as a series of almost inevitable stages going from pre-capitalist underdevelopment to fully developed capitalism. On the other hand, World Systems Theory, which has been influenced by Marxist notions of imperialism, views the world economy that began to arise in the sixteenth century as a series of "unequal exchanges" in which some regions, primarily Europe and the United States, developed at

the expense of other regions. The latter were originally "undeveloped" and only later became "underdeveloped" as a result of various forms of unequal exchange. According to the author, mining towns can be seen as internal colonies that are also subject to unequal exchange. Using participant observation, she analyzes the way in which local groups and classes (e.g. farmers, town merchants, and mine laborers) responded to the arrival in Mercer County of large multi-national energy corporations in the 1970s. Although finding some relevance in World Systems Theory, the author concludes that in this instance local residents were able to contend with big capital and achieve "a livable compromise."

The Wilderness Movement and the National Forests

Dennis M. Roth. College Station, TX: Intaglio Press, 1995. 105 pages. ISBN 0-944091-05-9 (paper) \$14.95. To order, call 800-768-5565.

This book is an historical and sociological study of the development and realization of the concept of wilderness preservation on the National Forests administered by the USDA Forest Service. It begins with early Forest Service efforts in the 1920's to set aside wilderness areas and follows the rise of the citizen wilderness organizations such as the Sierra Club and The Wilderness Society, which became the leading advocates of wilderness preservation from the 1950s to the present. The author presents several detailed case studies that analyze the ways in which contending interest groups—timber companies, miners, ranchers, wilderness organizations, and the Forest Service—attempted to define and implement the provisions of the Wilderness Act of 1964. All of the major precedent-setting political battles are discussed, including the Oregon Wilderness Act of 1984, which presaged the struggle to preserve old-growth forest habitat for the Northern Spotted Owl in the early 1990s. The author is a member of the Rural Industry Branch of the USDA Economic Research Service.



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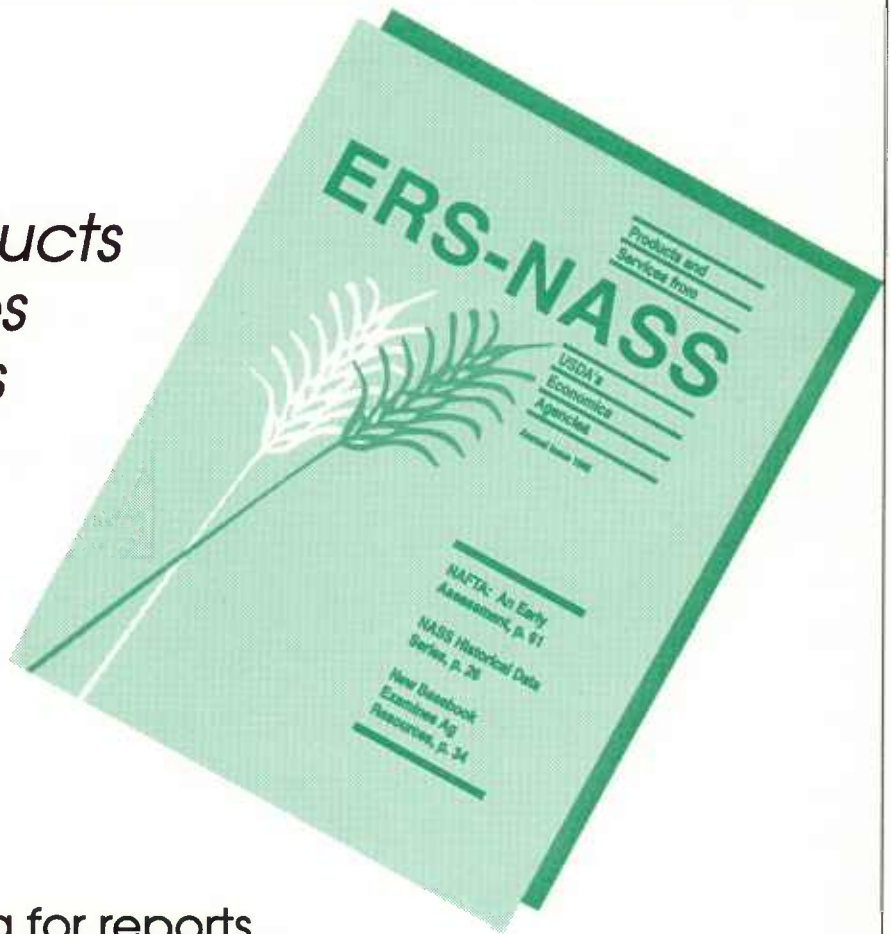
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